

Date: Thu, 22 Jul 93 11:16:19 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #888
To: Info-Hams

Info-Hams Digest Thu, 22 Jul 93 Volume 93 : Issue 888

Today's Topics:

 CW in weird places
DXCC field checking at Manchester convention (2 msgs)
 How does an American sign in Canada?
 ICOM W2A MODS
 Need Macintosh Compatible ".Z" Decode
 professional quality headphones.
 Radio Shack
Replacing ICOM 271/471 Ram Batteries...Better Do It!
 S Meters and Modern Technology (was Re: TS50)
STILL waiting for your license? Read this and weep!

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 22 Jul 93 07:29:53 GMT
From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu
Subject: CW in weird places
To: info-hams@ucsd.edu

In article <1993Jul21.135010.15960@mksol.dseg.ti.com> craigs@dseg.ti.com writes:

>

>I've been hearing it when there is no program audio (i.e., dead air). There's
still

>a signal there, but no audio (typically breaks to a commercial, breaks between
>stories, etc.) It is NOT the high speed tone bursts of the audio sync signal,
>unless they've taken to morse code for syncing :). Also, the morse audio volume
is just low enough to be on the fringes of my ability to pick it out from the

noise.

>I've noticed it most on CNN or HNN, but it has made appearances on MTV, the Weather

>Channel, etc. The few times I have been able to pick it out, it sounded like
>five letter/number groups..... Curious.

There *are* pirate signals on the satellites. Some hug the transponder edges, some hug the edge of existing signals. They're difficult to identify and track down if they remain low amplitude and hug next to an existing wideband signal. Spies? Who knows.

To prevent unauthorized illumination of transponders, the FCC requires uplink stations to include ID information in their signals. For our TV uplinks, we include our callsign in the vertical interval. Others may use Morse on a subcarrier. But what you're hearing may well be pirates. A couple of times I've seen narrow band signals remain on the transponder for a few seconds after we shut down an uplink.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: 22 Jul 93 14:17:16 GMT

From: news-mail-gateway@ucsd.edu

Subject: DXCC field checking at Manchester convention

To: info-hams@ucsd.edu

I'm heading to the ARRL Convention in Manchester, NH this weekend and have a few questions regarding the DXCC field checking operation that will take place there:

1. What day(s) will cards be checked?
2. I just recently received my initial mixed award (101), and in the mean time picked up enough cards for my 125 endorsement. Can I bring my cards to Manchester to get checked for 125? Is there a fee? (I think the answer is no because this would qualify as my 1 free submission in a calendar year)
3. I heard a rumor that someone from the league DXCC desk will be there so that cards that are not normally allowed to be field checked (like former Soviet republics) will be permitted. Is this true?

Thanks and 73,
Scott

--

Scott Ginsburg Voice: 508-436-3836
Wellfleet Communications Internet: ginsburg@wellfleet.com
2 Federal St. Amateur Radio: WA2CJT
Billerica, MA 01821 Packet: wa2cjt@n0ary.#nocal.ca.usa.na

Date: 22 Jul 93 17:34:46 GMT
From: news-mail-gateway@ucsd.edu
Subject: DXCC field checking at Manchester convention
To: info-hams@ucsd.edu

I wrote this:

|| 3. I heard a rumor that someone from the league DXCC desk will be there
|| so that cards that are not normally allowed to be field checked
|| (like former Soviet republics) will be permitted. Is this true?
||

|Yes. Definitely true.

|It wouldn't surprise me if this is a very busy activity, so you
|should probably plan to come early; Warren says they'll process all
|your cards, first-come-first-served. ^^^^^^ ^^^^^^ ^^^
|^^^ ^^^^^^

I posted too soon; new and correct information from Warren:

Maximum number of DXCC cards checked from any one individual
will be 110. This is due to processing constraints at HQ after
the convention ends.

So sorry for any inconvenience.

73, Warren

Sorry about the confusion.

/JBL KD10N

Date: Thu, 22 Jul 1993 04:34:44 GMT
From: agate!howland.reston.ans.net!torn!waterv2.uwaterloo.ca!waterv1!mks.com!

richw@ames.arpa

Subject: How does an American sign in Canada?

To: info-hams@ucsd.edu

Ben Coleman wrote:

If I, as an American ham, operate under the reciprocal agreement in Canada, how do my American band and segment privileges translate to operation in Canada? As an Extra-class operator, do I operate under the Canadian segmentation (or the lack of it), or am I still constrained by the American band segments? How do the other license classes translate to operation in Canada?

I'm pretty sure it all boils down to one simple rule: you can operate in Canada on any frequency and mode you can legally use in the US, and no more.

- (1) The Canadian bands are basically the same as in the US. (Are there any differences at all? I haven't really paid close enough attention to the details of the US bands lately.) There is no subbanding (at least, not in the legal rules).
- (2) Foreign hams in Canada who can do CW at 12 wpm or faster can use any mode in any band. This would cover US Extras, Advanced, and Generals.
- (3) Foreign hams who can do CW at 5-11 wpm can use only CW below 30 MHz. This would cover US Technicians (with code) and Novices.
- (4) Foreign hams who can't do CW at all can't operate below 30 MHz. This would cover US no-code Techs.
- (5) As stated earlier, you also have to abide by US restrictions (band plan stuff, etc.) in addition to the above.

For all the gory details, contact an office of Communications Canada and ask for a copy of their publication "RIC-25". The Communications office here in Kitchener, Ontario (west of Toronto) is (519) 571-6610.

--

Rich Wales // VE3HKZ // WA6SGA/VE3 // richw@mks.com // +1 (519) 884-2251
Mortice Kern Systems // 35 King St. N. // Waterloo, Ont., Canada N2J 2W9

Date: 22 Jul 93 09:36:33 GMT

From: ogicse!uwm.edu!math.ohio-state.edu!howland.reston.ans.net!agate!

uclink.berkeley.edu!michaeld@network.ucsd.edu
Subject: ICOM W2A MODS
To: info-hams@ucsd.edu

In article <743284830.AA04352@psybbs.durham.nc.us> you write:

>

>Electronic Specialists in Wilmington, NC, performed the full range of mods
>on my W2A for about \$55 (2 years ago).

>

>73, Gary KN4AQ Raleigh, NC

The mod (not mods) to my W2A was done for free, by an xtra who knew "how" to work w/surface mt. parts...just the same, I beleive after watching him that I could've done a better job: he smeared the white heat conducting grease that's between the finals and the case around a bit, and when I asked him if he planned on using silver-based solder (the standard for surface mount components) he says "nah, ya don't need that stuff."

I provided the copy of the mods file I ftp'd, and watched every move he made, having to "tutor" him on how to open the case (he tried pulling off the control knobs on the top, and started to unscrew the rings that hold them on w/a needle-nosed plier--before I said "gee, it looks like you open the case via the screws on the sides...)"

With the detail of the archived mod file, anyone who has a very small soldering iron (or mini hot air attachment for their butane iron), silver solder, some tweezers, the two diodes (ordered from ICOM, as per the mods instructions, all of ~\$3,00), a jeweler's set of screwdrivers for removing/replacing the back, a loup or magnifying glass on a stand, and the instructions, could do it. Unless they have a handicap that affects their vision, motor coordination, or thought processes. Total cost: ~\$40, including the propane iron and silver solder, which you then own so you can perform the mod for someone else (maybe for \$55?).

I said mod, and not mods, because we're discussing the hardware portion, right? The software portion is just the correct combination of keypad manipulation, which were provided by the store I bought it at.

If you happen to know just what that outfit did for their \$55, and it was more than removing one diode and installing two--all of the same value--I'd like to hear about it.

73,

Michael

Date: 22 Jul 93 16:14:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: Need Macintosh Compatible ".Z" Decode
To: info-hams@ucsd.edu

Can somebody please tell me where I can find a Macintosh compatible program that'll decode the ".Z" compressed "Info-Hams" Mail Archives?

For whatever reason, I never received Info-Hams V93 #874, and although I can get a copy of the file, from the Mail Archives @ UCSD.edu, I can't properly expand it.

Using a 'decode' routine that I do have results in a file that "Word" can show, but the text is all run together, and there are what appear to be non-printable characters showing-up as "blocks" throughout the text, making it very hard to read.

I'm using Dartmouth's "Fetch" 'ftp' utility to get the ".Z"'d copy of that particular archive, so I suppose there's always the chance that "Fetch" isn't properly transferring the compressed file.

Paul Nix (WB5AGF) InterNet: nix@bigbrd.aud.alcatel.com

Date: 22 Jul 93 09:47:33 GMT
From: news-mail-gateway@ucsd.edu
Subject: professional quality headphones.
To: info-hams@ucsd.edu

Gary Coffman KE4ZV opines...

>
>Maybe now is a good time to discuss the merits of wide response
>headsets, and audio chains, versus band limited units. My experience
>is that the band limited models are fatiguing during long sessions.
>Others prefer band limited audio. Note that this is somewhat separate
>from narrow IF filtering. It's hard to describe quantitatively, but the
>wide band units seem to give a more "open" sound. That's probably a
>result of less phase shift across the passband. What say you?

>
Gary

>
I totally agree! The design of the audio stages of a ham radio is just as critical as the design of hifi audio systems. My two pet hates are clipping and frequency non-linearity. Clipping (or speech processing) normally sounds horrible. Proper RF speech-processing I can just about accept, but the usual two-diodes-back-to-back is probably the most disgusting device you can put in the audio signal path.

Non-rectangular frequency response makes the speaker sound like Donald Duck... its often not possible to determine the gender of the speaker as a result. This is made far worse if you insist on using the cheap \$0.50 loudspeaker built into most rigs. Try plugging in a proper hi-fi speaker or professional quality headphones, and be impressed. Throw away that cheap microphone and spend \$150 on a studio-quality cardioid mic. instead; the people listening to you will notice the improvement. And why limit bandwidth to the usual ham 'communications quality' of 300 to 2700Hz? Specially on VHF (and 10 meters?) where theres plenty of spectrum to go round.

In days gone by, hams used to be proud of their audio quality; some used to achieve near-broadcast-quality (in the AM days). Some of us can still transmit properly shaped audio with sensibly wide bandwidth (7.5KHz) when occasions allow it. Has anyone tried Dolby-style intelligent processing on VHF? Stereo?

-Pete Lucas NERC Computer Services Swindon England
pjml%swmis.nsw.ac.uk@nsfnet-relay.ac.uk [Internet]
pjml@uk.ac.nsw.swmis [JANET]
g6wbj@gb7sdn.gbr.eu [Packet]

Date: 22 Jul 93 04:20:40 GMT
From: ogicse!emory!athena!aisun3.ai.uga.edu!mcovingt@network.ucsd.edu
Subject: Radio Shack
To: info-hams@ucsd.edu

In article <17946@news.duke.edu> jbs@ee.ee.duke.edu (Joe B. Simpson) writes:
>In article <CAH0Ir.1Hp@egr.uri.edu> swamik@orca.NoSubdomain.NoDomain (Swami
Kumaresan) writes:
>
><I called the other day to ask if RS had a certain transistor. The salesdroid
><said "Yes, it can be found in our cross refference.."
><I said: "Could u please look up (whatever it was) for me..."
><salesdroid: "Oh, I, uh, I have a line of customer waiting...but
>< u can look it up if u want..."
><I said: "I am sitting at home, abt 10 miles from ur store, hence
>< I cannot look it up from here, maybe u missed that..."
><
><Perhaps that was rude, but this is not the first instance a RS saledroif has
><been to lazy to help me over the phone.
>
>Maybe he had a bunch of customers waiting?

Touche'! Why should a phone caller be given priority over people who are actually standing there in the store?

One of my pet peeves is being ignored in a store because someone has called on the phone -- some people give _instant_ service to phone callers, but almost no service to the people who are actually shopping in the store!

--

```
:- Michael A. Covington, Associate Research Scientist      :      *****
:- Artificial Intelligence Programs      mcovingt@ai.uga.edu :      *****
:- The University of Georgia              phone 706 542-0358 :      *   *   *
:- Athens, Georgia 30602-7415 U.S.A.      amateur radio N4TMI : **  ***  **  <><
```

Date: 22 Jul 93 13:17:10 GMT
From: news-mail-gateway@ucsd.edu
Subject: Replacing ICOM 271/471 Ram Batteries...Better Do It!
To: info-hams@ucsd.edu

>I am concerned about the longevity of my Icom 271/471 internal batteries.
>These have an unknown age. I have been told that these can be replaced by
>first temporarily connecting a new battery in parallel with the existing one,
>removing the old battery, fitting a new one, and finally disconnecting the
>temporary one. Has anyone had any experience with this maneuver ? Sounds
>scary, but theory says it should be ok.....

>

>John Mcleod N6RCD.

I told folks locally that they should go ahead and replace the RAM batteries in their older rigs, even wrote an article about it for our local club newsletter. But, like the cobbler whose kids go barefoot, I kept putting it off myself.

Sunday I turned on the trusty old Icom 745 and all the display lights came on at the same time and it beeped once and nothing worked. Uh-oh.

Shipped it to Icom yesterday. Had to pay \$35 at the package store for box, peanuts, packing and shipping (ouch!). I don't know Icom's hourly rate, and there will be postage back. Bummer.

```
= = = = =
_      Miles Abernathy, N5K0B      =
| |__ miles@mbs.telesys.utexas.edu =
_|   | POB 7580, Austin TX 78713   =
\  * / University of Texas @ Austin =
 \ /   tel. (512) 471-6521          =
= = = = =
```

Date: 22 Jul 93 07:11:43 GMT

From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu

Subject: S Meters and Modern Technology (was Re: TS50)

To: info-hams@ucsd.edu

In article <29706@ksr.com> jfw@ksr.com (John F. Woods) writes:

>

>With a microprocessor-driven S meter, the calibration process would be simple:
>a test rig would feed known signal to the rig at several frequencies across
>each band, and would tell the microprocessor the signal strength and frequency
>for each one; the micro would read the digitized AGC voltage and write it to
>non-volatile memory. The cost: a few hundred bytes of ROM (plus a month of
>software engineering), a hundred bytes of NOVRAM, maybe five minutes of a
>technician's time to plug the rig into the test jig and unplug it when it's
>done, and (of course) the test jig itself. How much would it cost (the buyer!)
>per rig? Hard to tell; if the control ROM has lots of space left over, then
>that part has no incremental cost, but if they have to go to the next larger
>size ROM to fit this in (and when was the last time you saw a software project
>come in under size and time budgets?), then they use a more expensive ROM *and*
>maybe get to redesign the CPU board if this is added to an existing rig. Same
>with the NOVRAM; there's likely one there already, but they might have to go
>to a larger one (and if they managed to design the rig without one, well, in
>it goes). Test time is expensive, but if this was combined with other factory
>checks, it wouldn't be so bad; the test jig, if it is to have meaningful
>accuracy, is probably \$1000 worth of parts and \$10,000 worth of design time.
>All told, it would probably cost the buyer a couple of hundred (assuming a
>cost to the manufacturer of \$25-\$50 per rig and the usual healthy markup).

>

>Now, how many hams would REALLY pay \$200 for the knowledge that their S-meter
>REALLY measures received signal strength for the two weeks it takes the radio
>to drift out of spec? Think any manufacturer will believe they'll recover
>their engineering costs?

>

>Increased integration in rigs will eventually reduce the parts cost somewhat,
>but even then the fixed cost of design engineering, testing, and test equipment
>will still dominate. I think it's unlikely you'll ever see a really accurate
>S-meter again.

Such an open loop system is the hard way to establish reliable system gain characteristics. Professional color camera systems have a similar problem. They have to maintain a given gain response under all environmental and aging conditions in each channel in order to maintain proper colorimetry. That's done by taking an attenuated reference signal and injecting it into the preamps and adjusting the system gains so that the signals come out of the RGB channels at the proper amplitude. This CAL pulse is similar in concept to the frequency calibration markers in use in radios, except it's an amplitude reference rather than a frequency reference.

It should be relatively simple to implement a log stepped amplitude reference in a radio and have the radio automatically insert and measure this reference at each band change, or power up. That would give it a self calibration check that would compensate automatically for variations in stage gain.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: 22 Jul 93 15:06:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: STILL waiting for your license? Read this and weep!
To: info-hams@ucsd.edu

Douglas A. Dever N8VUR (floyd@nraven.wariat.org) writes:

> Unfortunately most of us have learned the hard

^^^^^^^^^^

> way that you don't want an ARRL VE to be involved in your upgrading, or
> initial licensing.....

Ahem. Please don't speak for me or the rest of us that have upgraded or got our initial licenses through an ARRL VE session and have had absolutely no problems, no unusually long waits, etc. For us, the ARRL VEC and the ARRL VEs themselves have done just fine.

I've been working as part of the Wellesley Amateur Radio Society VE team. We're an ARRL VE team, we put on well run sessions, and the folks at ARRL VEC do a good job at their part of it. ARRL VEC has never screwed up anything with our sessions and the time it takes our examinees to get their licenses seems to correlate well with the times reported on this discussion group. So, now what? Some people report problems and I've just reported success. Sounds pretty normal to me.

Douglas, if you have proof of your "most of us learned the hard way" statement, then provide it, otherwise please don't waste net bandwidth with the same old ARRL bashing I've heard for 20 years now. Like most things in life, the ARRL is not perfect, but they do a pretty good job and for the ARRL bashers: they're the best we've got.

>Can you guys say W5YI???

>I'll bet you can now! :)

I'm sure that W5YI-VEC and W5YI VE teams have their successes and problems, too. Is the W5YI system perfect? I doubt it. Is it better than ARRL's? I don't have any reason to think either one is better or worse.

>And just think!!! They're going to take over some of the licensing
>aspects..... hmm, I hope no one want a club call for the next decade or
>so...

Oh, really? I know that the ARRL has offered to do something with regards to military and club license, but I wasn't aware that the FCC said yes to any of that.

73,

Scott W01G

=====

Scott Sminkey	email: sasminkey@eng.xyplex.com
Software Sustaining Engineering	voice: 508 952-4792
Xyplex, Inc.	fax: 508 952-4702
295 Foster St.	(Opinions, comments, etc. are mine,
Littleton, MA 01460	not Xyplex's...)

Date: 22 Jul 1993 06:33:44 GMT
From: olivea!inews!ilx018.intel.com!ilx049!dbraun@ames.arpa
To: info-hams@ucsd.edu

References <CAEy70.KLL@ms.uky.edu>, <1993Jul20.040951.3953@bongo.tele.com>,
<1993Jul20.174650.129714@locus.com>live
Reply-To : dbraun@iil.intel.com
Subject : Re: Professional quality earphones - source?

I have used several of the Koss "PRO" series headphones over the years. They are overrated, and not very good mechanically, especially for something that supposedly is used by radio stations, etc. The vinyl of the ear cushions will harden from contact with the oils in your skin. The vinyl strap that goes across your scalp broke on my current set, plus you get a crinkly sound from one of the diaphragms when you push that side of the headphones against your head.

--

Doug Braun

Email: dbraun@iil.intel.com
Intel Mail: IDC1-41

iNet: 8-435-5069 Long Distance: 011-972-4-655069
Fax: 8-435-5999 Long Distance: 011-972-4-655999
Snail Mail: US: Other:
PO Box 311 Intel Israel, Ltd.
Mendham, NJ 07945 IDC1-41
Matam Scientific Center
Haifa, Israel 31015

"There is no human problem which could not be solved if
people would simply do as I advise." -- Gore Vidal

Date: 22 Jul 93 07:17:06 GMT
From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu
To: info-hams@ucsd.edu

References <1993Jul19.174731.4789@pixar.com>, <1993Jul21.090935.29250@ke4zv.uucp>,
<CAIqDx.F1o@fc.hp.com>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: SMD rework was(Re: Alinco DJ-580 Intermod Reduction)

In article <CAIqDx.F1o@fc.hp.com> jayk@fc.hp.com writes:

>
>There is a company that sells a very nice soldering iron station and
>has tips available for removing most every kind of SMT part. The price
>involved would be way too much for home use though.
>
>We use these irons and tips at work for SMT repair instead of hot air.
>It seems that the hot air method, if uncontrolled, can result in partial
>reflows of adjacent solder joints. This can sometimes cause long term
>reliability problems.

Yes, but it's relatively easy to control the hot air flow. There are
two methods generally in use. The first is sheet metal shrouds of
various shapes to direct the air. The other, and the one I prefer,
is to use modelling clay to build a heat dam around the part to be
reworked. The clay is easy to apply, peels right off when done, and
is reusable.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Thu, 22 Jul 1993 17:17:12 GMT
From: news.service.uci.edu!ttinews!avatar!sorgatz@network.ucsd.edu
To: info-hams@ucsd.edu

References <22e778\$t15@jericho.mc.com>, <22ebdf\$9fa@orca.es.com>,
<1993Jul20.030631.2039@uhura.neoucom.edu>
Subject : Re: TS50 Illegal!

In article <1993Jul20.030631.2039@uhura.neoucom.edu> wtm@uhura.neoucom.edu (Bill Mayhew) writes:

>
>It sure is great having the FCC get bent out of shape over this
>stuff instead of getting rid of CB bandits on 10 meters.

>
>
Unfortunately Bill the FCC hasent got the balls to go after the CBers, or so-called "Freebanders"! Here in 6-land, the FCC has routine matters that take precedence, or so a growing number of hams are being told. In order these priorities seem to be:

- 1) AirForce 1 & 2, and all communications relating to or associated with government/military/diplomatic matters.
- 2) Commercial and Civilian Aviation, radar, atc, etc
- 3) Law Enforcement, Fire Protection and Public Safety Communications
- 4) Commercial Broadcast Communications and Common Carriers.
- 5) Business Communications, SMR's etc.
- 6) EMI/RFI Certifications/Type-Acceptance, Testing and Investigation
- 7) Licenses and related matters
- 8) Amateur Radio
- 9) CB Radio and all license-free Part 15 Matters.

So as you can see, it's of very little concern. Coupled with the class-action suits brought by MALDEF against the Commission in the early 1970's, for what was termed "Selective Prosecution"; The FCC is quite unwilling to do ANYTHING about the illegal use of frequencies, "in and around 10 and 11 meters..by individuals not in possession of a valid Amateur License or Aeronautical license

having been grandfathered for said operations". That's right! Those freqs between CB and 10 meters are actually AERONAUTICAL MOBILE FREQUENCIES!!

As has been noted in several of my earlier postings, The ARRL has also turned an almost deaf ear to the goings-on, at least here in Los Angeles, Ca. I quite honestly suspect that the ARRL fears being the target of MALDEF should they attempt to have the FCC do it's rightful duty. I would personally like to see the INS and the Justice Dept. run MALDEF's core of Mexican Nationals, trained AS jailhouse lawyers out of the country and out of the FCC's hair!

(Why ask WHY? Run cw...give it a TRY! ;-)

73!

-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-----+
TTI(es@soldev.tti.com)or: sorgatz@avatar.tti.com *Government produces NOTHING!*
3100 Ocean Park Blvd. Santa Monica, CA 90405 +-----+
(OPINIONS EXPRESSED DO NOT REFLECT THE VIEWS OF CITICORP OR ITS MANAGEMENT!)

End of Info-Hams Digest V93 #888
